

TNU

Fieldbus-compatible multiple-axis connection



Less Wiring Required

Connecting to a PLC through a fieldbus network requires less wiring than an I/O cable connection. In addition, the network unit and each driver controller can be connected with a single dedicated cable.

Up to 16 Axes Can Be Connected

Up to 16 axes of mixed THK driver controllers (TLC, and THC) can be connected using one TNU and TJU (branch unit) in combination.

System Configuration

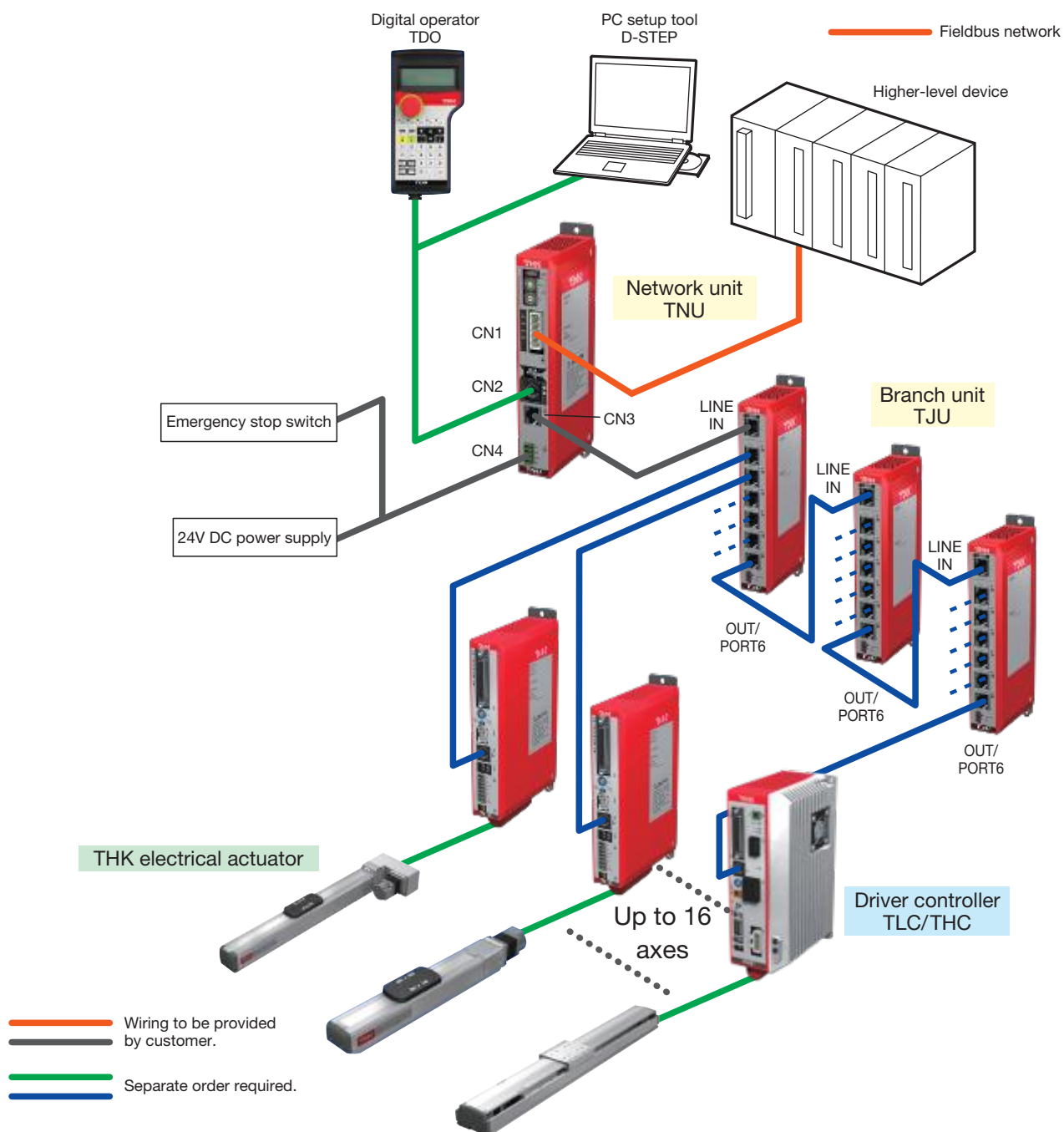
ES/EC

KRF

US/USW

PCT/PC

Controller



Model Configuration

● Network unit

Model	Network type
TNU	CC
(1)	(2)
TNU	CC: CC-Link

● Branch unit

Model
TJU
(1)
TJU

● TACnet cable (between TJU and driver controller)

Model	Type	Cable length
CBL	NW	01
(1)	(2)	(3)
CBL	NW	01: 1m
		03: 3m

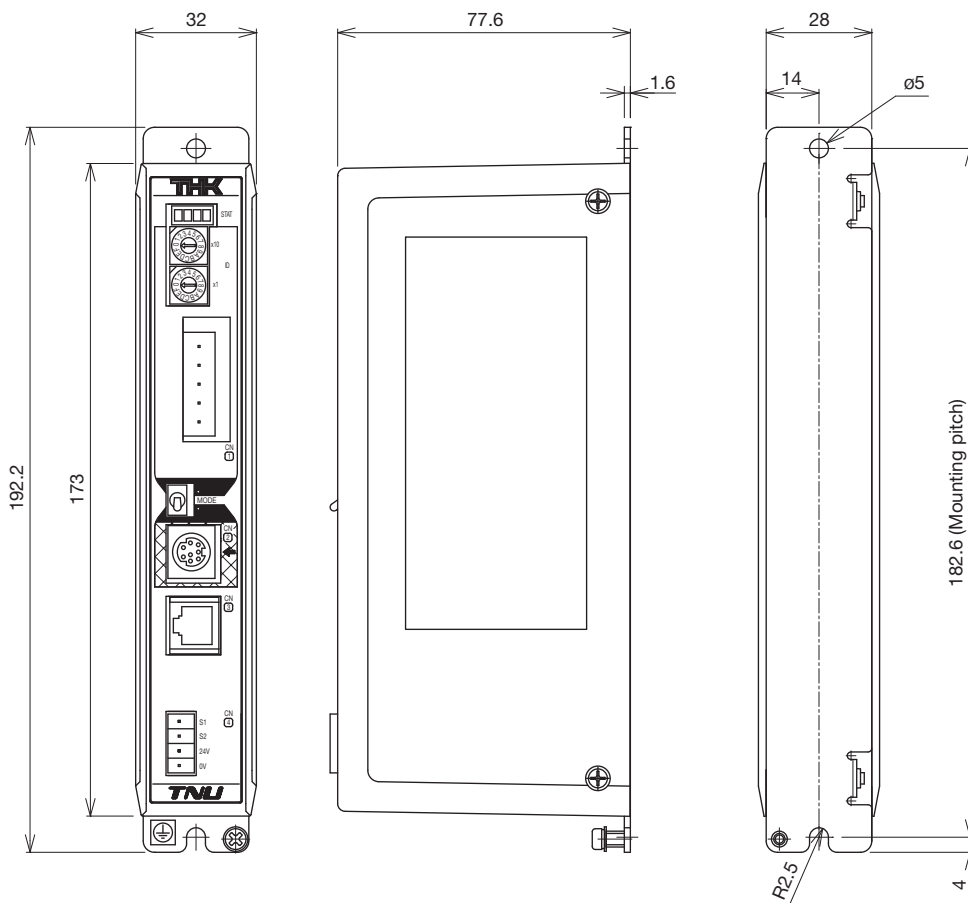
Use an industrial Ethernet cable between TNU and TJU, and between TJUs.

Specifications

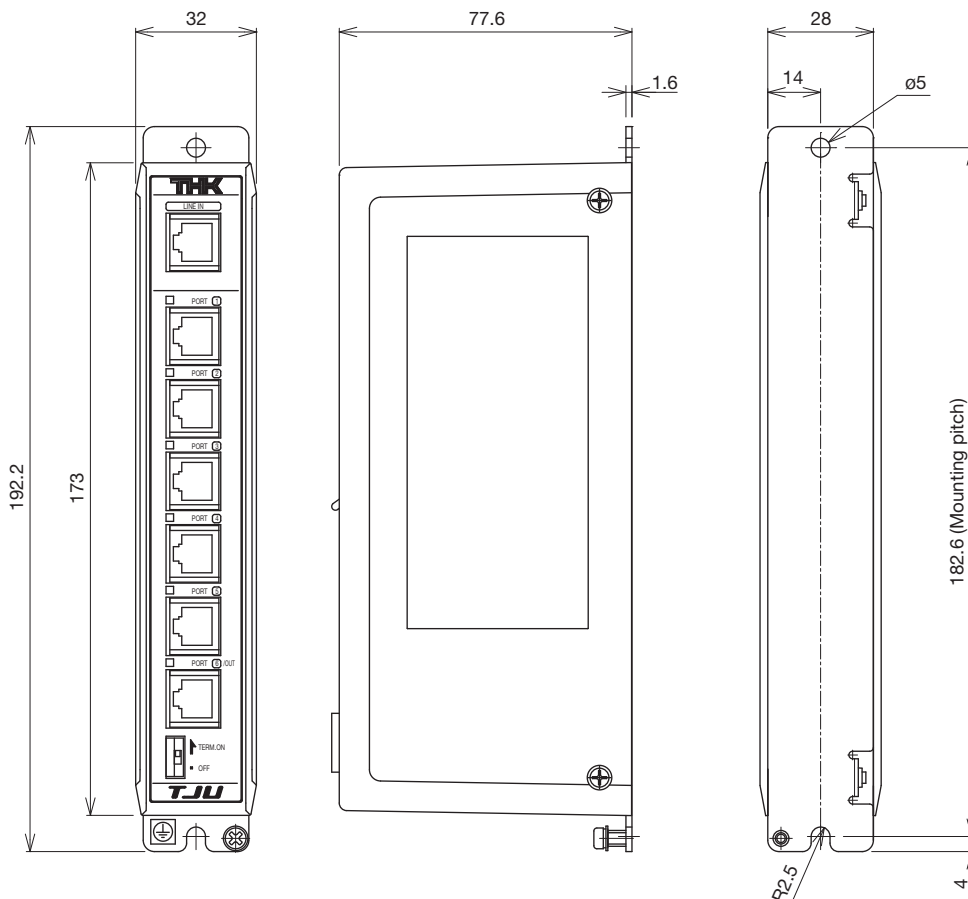
Type		TNU-CC
Fieldbus	Communication standard	CC-Link Ver1.1
	Communication speed [bps]	10M/5M/2.5M/625k/156k
	Number of occupied stations	Four remote device stations
Applicable controller		TLC, THC
THK network	Transmission channel type	RS-485
	Communication speed [bps]	38.4k/57.6k/115.2k
	Communication method	Half duplex
	Maximum trunk length [m]	20
	Maximum number of connectable axes	16
Input power supply		24V DC $\pm 10\%$, up to 0.3A
Operating/storage temperature [°C]		0 to 40°C (No freezing)/-20 to 85°C (No freezing)
Operating/storage humidity [RH %]		90 or below (No condensation)
Ambient condition		An indoor place (not exposed to direct sunlight) free from corrosive gas, flammable gas, oil mist, and dust
Protective function		Higher-level network communication error, communication error, system error
Weight [g]		240 (TJU: 220)

Dimensions

● TNU



● TJU



The external dimensions and mounting dimensions of TNU and TJU are the same.

ES/EC

KRF

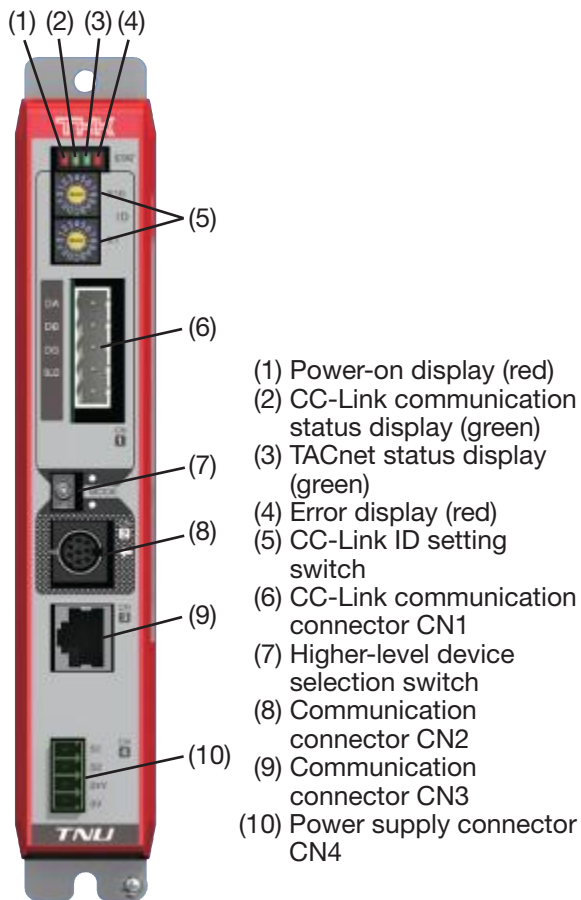
US/USW

PCT/PC

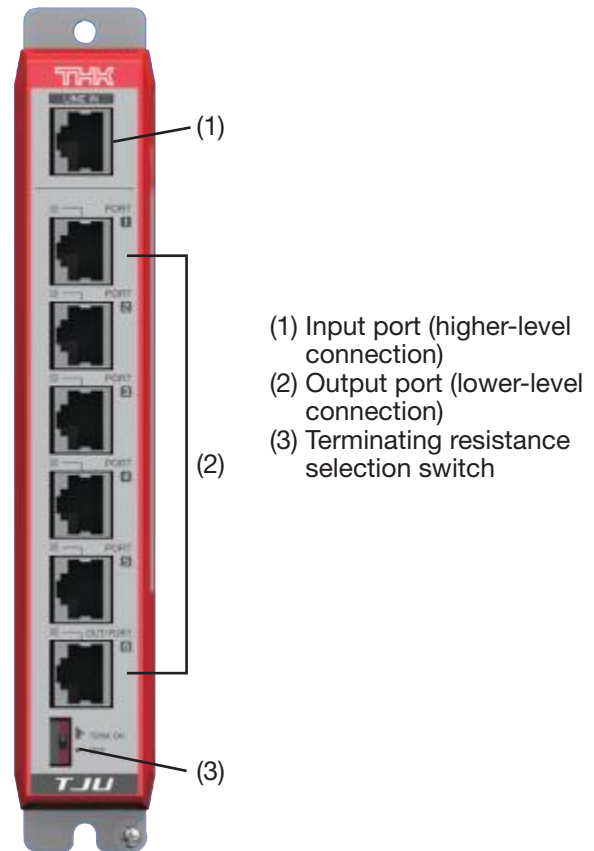
Controller

Components

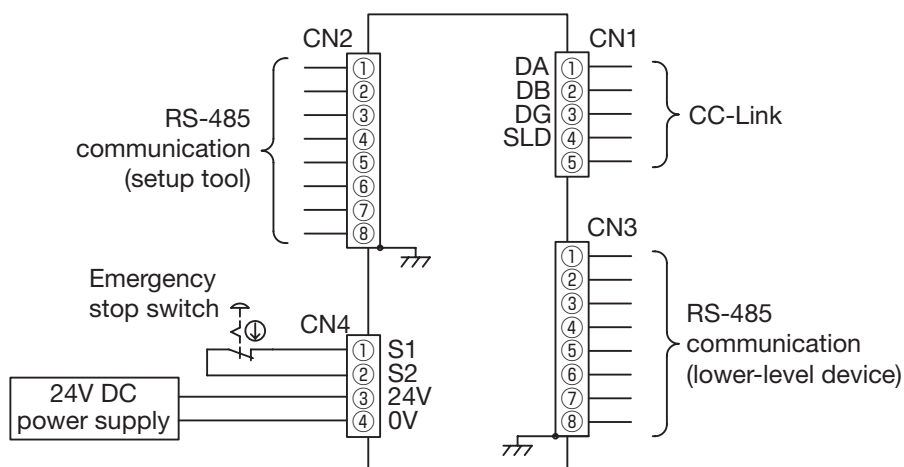
● TNU



● TJU



External Device Connection (TNU)



Note: The emergency stop terminals (CN4-S1 and S2) are not used for power shutdown of TNU, but used for an emergency stop of the lower-level device (THK driver controller).

TDO Digital operator (separate order required)



Features

Simple, quick operations and settings of TLC and THC are possible without using a PC.

Simple Operation

Key sheet with a straightforward design,
LC with backlight (20 digits × 4 lines).

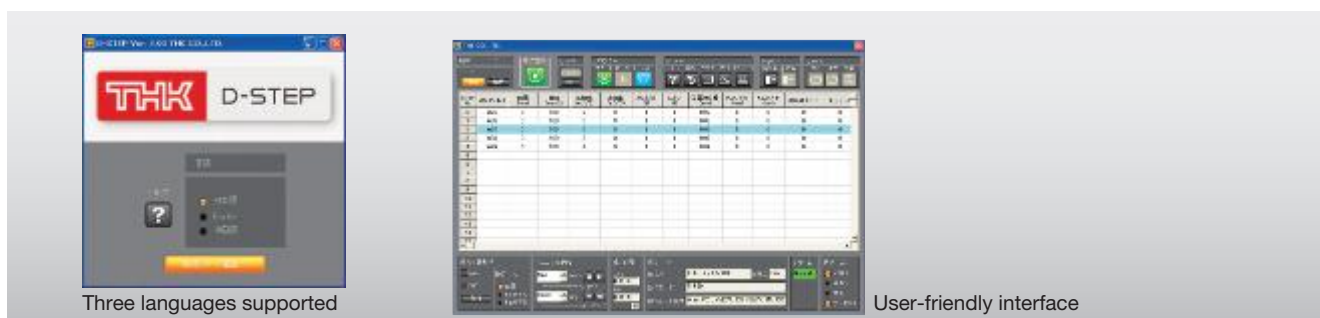
Functions

- Checking and editing step data and parameters
 - Operation of actuator
(Return to home position, Jog operation, Inching operation, Program execution, Servo ON/OFF, Electromagnetic brake ON/OFF)
 - Monitor (I/O, Current position, Position command, Current command, Version display)
 - Alarm (History display, Clear history, Interrupt display on occurrence, Alarm reset)
 - Settings (Backlight luminance, LCD contrast, Beep tone, Automatic turn off of backlight)
 - Enable switch (3 positions) - Protection structure IP54 (excluding cable connectors) - Display language (Japanese/English)
- External dimensions: 110mm (W) × 218.3mm (H) × 66.6mm (D) (excluding crests)
Main unit weight: 400g (excluding cables) Cable length: 5m
TLC/THC is supported with Version 1.03 or later.
TNU is supported with Version 1.10 or later.

Model Configuration

Model	Type
TDO	N
(1)	(2)
TDO	N: Category 2* compliant type
	* ISO 13849-1

D-STEP PC setup tool



Features

Supports multifunctional TLC/THC with user-friendly interface.

Simple Operation

Operations and settings of TLC and THC are possible using a PC.
Equipped with functions useful for maintenance, such as backing up data or logging operating states.

Functions

- Checking, editing, backing up, or offline-editing of step data
 - Checking, editing, backing up, or offline-editing of parameters
 - Operations of actuator (Return to home position, Jog operation, Inching operation, Program execution, Servo ON/OFF)
 - Monitor (I/O, Current position, Position command, Current command) - Logging (Speed and current waveform display)
 - Alarm (History display, Clear history, Alarm reset) - Display language (Japanese/English/Simplified Chinese)
- Supported OS: Windows XP/Windows Vista/Windows 7
D-STEP can be freely downloaded from the THK technical support website (<https://tech.thk.com/>).
TLC/THC/TNU is supported with Version 1.10 or later.

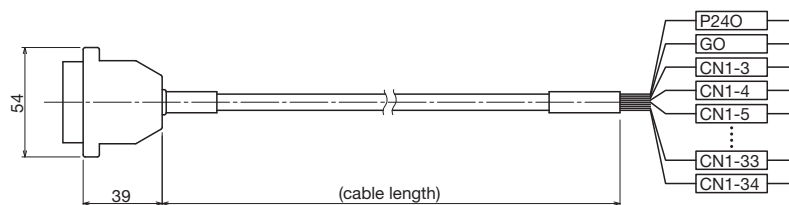
Cable

I/O cable: CBL TSC IO ** (optional)

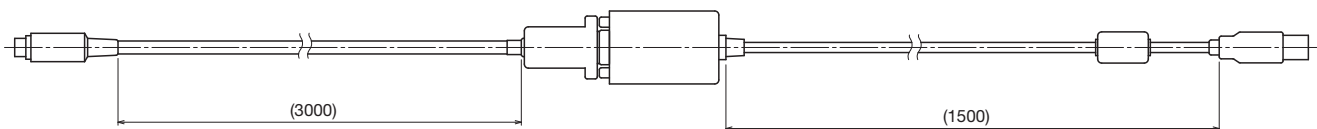
** indicates cable length: 03 (3m), 05 (5m), 07 (7m), or 10 (10m).

Cables are shipped with the discrete wire side terminals unprocessed.

Cables are used for TLC/THC.



PC communications cable: CBL-COM-03 (optional)



ES/EC

KRF

US/USW

PCT/PC

Controller



Controller	PCT/PC	US/USW	KRF	ES/EC
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